

WHAT IS CLAIMED IS:

1. A lens apparatus mountable to a camera comprising:
 - a focus driver which drives a focus lens;
 - 5 a terminal which is a member for communication with the camera; and
 - a signal generating circuit into which an image-pickup signal output from the camera is input via the terminal, and which generates a focus driving signal for
 - 10 the focus driver based on the image-pickup signal.
2. The lens apparatus according to claim 1,
 - wherein the signal generating circuit calculates evaluation values each indicating the sharpness of an image,
 - 15 based on the image-pickup signal input from the camera, and generates the focus driving signal based on a comparison result of a plurality of the calculated evaluation values.
3. The lens apparatus according to claim 1, further
- 20 comprising:
 - a parallel communication terminal for performing communication with the camera by a parallel communication format as the terminal;
 - a serial communication terminal for performing
 - 25 communication with the camera by a serial communication format as the terminal;
 - an image input circuit into which an image-pickup

signal is input from the camera through a communication line connected to the parallel communication terminal;

a communication format determination circuit that determines whether the camera complies with the serial
5 communication format; and

an image-pickup signal selection circuit which outputs the image-pickup signal, which has been input into the image input circuit, to the signal generating circuit, when the communication format determination circuit has
10 determined that the camera complies with the serial communication format.

4. The lens apparatus according to claim 1, further comprising:

15 a parallel communication terminal for performing communication with the camera by a parallel communication format as the terminal;

a serial communication terminal for performing communication with the camera by a serial communication
20 format as the terminal;

an image input circuit into which an image-pickup signal is input from the camera through the serial communication terminal;

a communication format determination circuit that
25 determines whether the camera complies with the parallel communication format; and

an image-pickup signal selection circuit which

outputs the image-pickup signal, which has been input into the image input circuit, to the signal generating circuit when the communication format determination circuit has determined that the camera complies with the parallel
5 communication format.

5. The lens apparatus according to claim 1, further comprising:

a parallel communication terminal for performing
10 communication with the camera by a parallel communication format as the terminal;

a serial communication terminal for performing communication with the camera by a serial communication format as the terminal;

15 a first image input circuit into which an image-pickup signal is input from the camera through the parallel communication terminal;

a second image input circuit into which an image-pickup signal is input from the camera through the serial
20 communication terminal;

a communication format determination circuit that determines the communication format with which the camera complies; and

an image-pickup signal selection circuit which
25 outputs the image-pickup signal, which has been input into the first image input circuit, to the signal generating circuit when the communication format determination circuit

has determined that the camera complies with the serial communication format, and which outputs the image-pickup signal, which has been input into the second image input circuit, to the signal generating circuit when the
5 communication format determination circuit has determined that the camera does not comply with the serial communication format or that the camera complies with the parallel communication format.

- 10 6. An image-pickup system comprising:
a lens apparatus according to claim 1; and
a camera to which the lens apparatus is mountable,
and which sends an image-pickup signal to the lens apparatus.

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7. A lens apparatus mountable to a camera, the camera combining an image-pickup signal with a control signal for controlling the lens apparatus and outputting the combined signal, the lens apparatus comprising:

- 20 a focus driver which drives a focus lens;
a terminal which is a member for communication with the camera;
a signal extraction circuit which extracts the image-pickup signal from the combined signal input from the
25 camera via the terminal; and
a signal generating circuit which generates a focus driving signal for the focus driver based on the image-

pickup signal extracted by the image-pickup signal extraction circuit.

8. The lens apparatus according to claim 7,

5 wherein the signal generating circuit calculates evaluation values each indicating a sharpness of an image based on the image-pickup signal extracted by the signal extraction circuit, and generates the focus driving signal based on a comparison result of a plurality of calculated
10 assessment values.

9. The lens apparatus according to claim 7,

 wherein the signal extraction circuit extracts the image-pickup signal by blocking a component of the control
15 signal in the combined signal.

10. The lens apparatus according to claim 7, further comprising:

 a processing circuit which performs control
20 processing in accordance with the control signal extracted from the combined signal.

11. The lens apparatus according to claim 7, further comprising:

25 a prohibiting signal output circuit which outputs a signal prohibiting generation of a focus driving signal based on the image-pickup signal to the signal generating

circuit when there is a level change in the control signal included in the combined signal.

12. An image-pickup system, comprising:

5 the lens apparatus according to claim 7;

a camera to which the lens apparatus is mountable, and which sends the combined signal obtained by combining the control signal and the image-pickup signal to the lens apparatus.

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13. A lens apparatus comprising:

a driver;

a first terminal which is a member for communication with a first camera, the first camera having a
15 communication function according to a first communication format;

a second terminal which is member for communication with a second camera, the second camera having a communication function according to a second communication
20 format; and

a circuit which outputs a driving signal for the driver based on a signal received at the second terminal when the lens apparatus is mounted to the first camera.

25 14. An image-pickup system, comprising:

the lens apparatus according to claim 13,

the first camera which sends the signal to the second

terminal of the lens apparatus.